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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,613	01/10/2000	IVAN MAURICE ALFONS JAN HERBOTS	CM1550	5310

27752 7590 04/17/2003

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EXAMINER

ELHILO, EISA B

ART UNIT	PAPER NUMBER
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1751

20

DATE MAILED: 04/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

BEST AVAILABLE COPY

Office Action Summary	Application No.	Applicant(s)	
	09/462,613	HERBOTS ET AL.	
	Examiner	Art Unit	
	Eisa B Elhilo	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 27-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 27-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 1 and 27-62 are pending in this application.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 27-49 and 54-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oxienboll et al. (US` 5,834,280) in view of Van Pee (WO 96/06909).

Oxenboll (US` 280) teaches detergent composition comprising surfactant system (see col.27, lines 19+), hydrogen peroxide source (see col. 24, line 55) and fatty acids as organic acids (see col. 27, lines 5+) used for fabric conditioners (see col. 28, lines 13+). Oxenboll also teaches detergent composition comprising fatty acids and mono- and di- triglycerides of fatty acids (see col. 27, lines 5+). Oxenboll further teaches glucose oxidase oxidizes D-glucose in the presence of oxygen producing D-gluconic acid and hydrogen peroxide. The hydrogen peroxide formed, in the presence of peroxidase. After a fixed reaction time the amount of hydrogen peroxide is measured (1 UNIT is the amount of glucose oxidase which under the standard conditions forms 1 μ mole of hydrogen peroxide per minute (see col. 11, lines 13+). Oxenboll also teaches peroxy bleach compounds such as alkali metal perborates and alkali metal percarbonates (see col. 28, lines 20), enzymes (see col. 27, lines 35-37). The reference also, teaches the methods of cleaning and removing bacteria from teeth, mouth, dishware and contact

lenses (see col. 9, lines 19+ and col. 76, claim 13). The reference further, teaches a detergent composition having a pH in the ranges of 7-11 (see col. 28, lines 43-45).

The instant claims differ from the reference by reciting oxidoreductase enzyme with α/β -hydrolase fold and a catalytical triad consisting of amino acid residues histidine, serine and aspartic acid.

However, Oxenboll teaches and discloses a detergent composition comprising enzymatic system and one or more other enzymes may be used (see col. 27, lines 34-37).

Van Pee (WO' 909) teaches in analogous art, enzymatic active oxygen-releasing mixture be used as oxidizing agents for preparing chemical compounds and in bleaching, washing, cleaning and disinfecting agent. The mixture contains oxidoreductase with an α/β -hydrolase fold and a catalytic triad consisting of aminoacids serine, histidine and aspartic acid, a peroxide source, and an aqueous solution of an organic acids (see the abstract and page 2, lines 30+). Van Pee also teaches *Serratia marcescens* as a source of the oxidoreductase (see page 7, line 11). Van Pee further, teaches a detergent composition having a pH of 6.8 (see page 9, line 16).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art would have been motivated to modify the primary reference by incorporating oxidoreductase with an α/β -hydrolase's fold and a catalytic triad consisting of aminoacids serine, histidine and aspartic acid as taught by Van Pee to make such a composition with a reasonable expectation of success because Oxenbol teaches detergent composition that may additionally comprises one or more other enzymes (see col.27, lines 34-36) and, thus, the person of ordinary skill in the art would expect such composition to have similar properties to those claimed, unexpected results.

Regarding claims 27-29, the determination of the percentage amounts of the enzyme in the composition is obvious within the level of the one having ordinary skill in the art, and the person would be motivated to determine optimum amounts to get the maximum effect of the composition. Regarding claims 31-33, the determination of the percentage amounts of the organic acid in the composition is obvious within the level of the one having ordinary skill in the art, and the person would be motivated to determine optimum amounts to get the maximum effect of the composition.

Claims 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oxienboll et al. (US' 5,834,280) in view of Van Pee (WO 96/06909) and further, in view of Figueroa et al. (US' 5,500,153).

The disclosures of Oxienboll (US' 280) and Van Pee (WO' 909) are summarized above. The references do not teach or disclose cleaning compositions comprising a metallo catalyst based bleach system.

However, Oxenboll teaches detergent composition that may additionally contain other bleaching agents such as perborates and percarbonates (see col. 28, lines 20+) and Van Pee also teaches a cleaning composition comprising bleaching system of perborates and percarbonates components (see page 3, line 20).

Figueroa (US' P153) in other analogous art of cleaning and detergent compositions teaches a composition comprising bleaching agents catalyzed by means of a manganese compounds (see col. 13, lines 19+).

Therefore, in view of teaching of the secondary reference one having ordinary skill in the art at the time the invention was made to be motivated to modify the primary reference by

incorporating the bleaching agents that catalyzed by means of the manganese compounds as taught by Figueroa with the reasonable expectation of success because both teachings of Oxenboll and Van Pee suggest the incorporation of the bleaching systems in the detergent compositions and, thus, a person of the ordinary skill in the art would expect such a composition to have similar properties to those claimed in the absence of contrary.

Response to Applicant's Arguments

11 Applicant's arguments filed March 19, 2003 have been fully considered but they are not persuasive.

With respect to the rejection based upon Oxenboll (US' 280) in view of Van Pee (WO' 909), Applicant argues that the combined references fail to teach or suggest an oxidoreductase-containing cleaning composition comprising a pH of from 7.5 to 12.7.

The examiner respectfully disagrees with the above arguments because Oxenboll as a primary reference teaches a detergent composition having a pH in the range of 7-11 which within the claimed range (see col. 28, line 43) and Van Pee teaches a detergent composition comprising oxidoreductase enzyme and having a pH in the range 3.5 to 6.8 at a given temperature from 15 to 80°C (see abstract and page 9, line 16). Therefore, Van Pee discloses a pH values that related to and depend on specific range of temperature and might be changed due to the changes in the temperature and, thus, a person of ordinary skill in the art would be motivated to adjust the pH of the composition based on the temperature of the detergent composition in order to increase the reactivity of the enzyme to get the maximum results.

With respect to the rejection based upon Van Pee (WO' 909) in view of Figueroa (US' 153), Applicant argues that the pH of the claimed composition is unequivocal evidence that the

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enzymes disclosed in the claimed invention are different from those disclosed by Van Pee and thus exhibit their optimal activity in a higher pH environment.

The examiner respectfully disagrees with the above arguments because Van Pee teaches a mixture that has a pH of 6.8 (see page 9, lines 16), which is about 7, and hence, the pH range is inside the optimal pH range of the claimed enzymes. Figueroa teaches detergent composition that comprises enzymes of any suitable origin such as bacteria and fungal. Further, a prima facie case of obviousness exists where the claimed ranges and prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, see *Titanium Metals Corp. of America v. Banner*, 778F. 2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.051. Therefore, there is a reasonable expectation of success for the motivation in combining the enzymatic mixture of Van Pee with the detergent composition of Figueroa reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eisa B Elhilo whose telephone number is (703) 305-0217. The examiner can normally be reached on M - F (7:30-5:00) with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (703) 308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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Elhilo
April 9, 2003



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REGISTERED PATENT ATTORNEY